

NORTHROP GRUMMAN

DEFINING THE FUTURE

Weight & Power Requirements Analysis

5 October 2004

Northrop Grumman Corporation



Timeline

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- **Requirements negotiated 9 July 2004**
 - Preceded by a brief (~2 hr) requirements analysis/estimating process
- **Requirements discussed briefly at TIM on 14 July 2004**
- **Requirements on contract 22 July 2004**
- **NG began Use Case generation after contract modification received**
- **NG presented draft Use Case (PowerPoint format) on 14 September at TIM**
- **NG received white paper with additional requirements on 14 September at TIM**
- **Iterations on white paper with user reps during the week of 20-24 September**
- **Detailed requirements review with Army SMEs 27-28 September**
- **NG updated analysis 29 September - 5 October**

SOW Paragraph

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4.3.1.1 Helicopter Weight and Power Calculator (SOW)

The contractor shall provide the capability to conduct route specific helicopter weight and power calculations and to produce required Weight and Power Forms in accordance with Army Aircrew Training and NATOPS manuals. In addition, performance calculations may be conducted for departure, cruise, destination and hover points. The UPC provides the capability to conduct 'what if' calculations using the specific aircraft and ambient conditions for any designated point along the route. This requirement is not currently supported by the JMPS tabular view.

User Functions (FW):

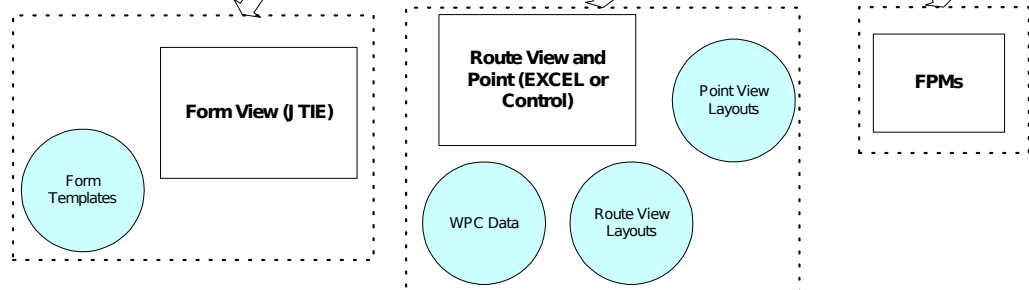
- 1) Create New Route View for WPC EI
- 2) Replicate Route View EI
- 3) Delete Route View EI
- 4) Update Route View Fields EI
- 5) Refresh/populate Route View from Route EO
- 6) Apply Route View layout EI
- 7) Save Route View layout EI
- 8) Delete Form View layout EI
- 9) Hide/show columns or rows (Rt View, update) EI
- 10) Display populated form view EO
- 11) Calculate WPC EO
- 12) Drill into Point View/alter fields EI
- 13) Hide/show columns or rows (Point View, update) EI
- 14) Add Calculations EI
- 15) Delete Calculations EI
- 16) Perform What If calculations (no points) EO
- 17) Input point from off route/add row EI
- 18) Delete point off route/delete row EI
- 19) Hover Cruise Calculator (no points, this is point view)
- 20) Preferences EI
- 21) Print Route View EO
- 22) Print forms EO
- 23) Color Legend for all views EQ
- 24) Create forms EI
- 25) Replicate forms EI
- 26) Delete forms EI
- 27) Update forms EI
- 28) User sets error message filter EI
- 29) Create New Point View Layout for WPC EI
- 30) Replicate Point View Layout EI
- 31) Delete Point View Layout EI

Options

- 1) Tail Specific parameters
- 2) Optimizations (corridor)
- 3) Optimizations (route)
- 4) Weight and Balance

User Functions (FW):

- 8) Display form view
- 8) Print form
- 8) Alter form layout/
contents



Contract Tasking

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- WPC Data Store
- Preferences (data store)
- Color Legend for all views
- Refresh/populate Route View from Route
- Display populated form view
- Calculate WPC
- Perform What If calculations (no points)
- Print forms
- Delete Form View layout
- Add Calculations
- Delete Calculations
- Hover Cruise Calculator (no points, this is point view)
- Preferences (Set for WPC)
- Input point from off route/add row
- Access Vehicle Configuration Data
- Access FPM Mapping (pre-built)
- Drill into Point View/alter fields

Additional Requirements in White Paper

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- **Additional requirements estimated at 93 FPs (all threshold requirements) with following transactions (details on spreadsheet):**

Route View Route View Layouts

Refresh/populate Route View from Route

Print Route View

Create New Route View for WPC

Replicate Route View

Delete Route View

Update Route View Fields

Apply Route View layout

Save Route View layout

Form View

Form Templates

Create forms

Replicate forms

Delete forms

Update forms

Point View

Delete point off route/delete row

Hide/show columns or rows (Route View, update)

Hide/show columns or rows (Point View, update)

Create New Point View Layout for WPC

Replicate Point View Layout

Delete Point View Layout

User Features Input point from off route/add row

User sets error message filter

Point View Layouts

Additional Points

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- **The objective requirements have not been estimated (identified in MAJ Sheyda document)**
- **There does not appear to be any functionality that can be traded from the current scope for either additional threshold or objective requirements**